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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,963	08/18/2006	Mitsuma Matsuda	4731-0137PUS1	1057

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EXAMINER
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SLIFKA, COLIN W

ART UNIT	PAPER NUMBER
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4162

NOTIFICATION DATE	DELIVERY MODE
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09/18/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,963	<b>Applicant(s)</b> MATSUDA, MITSUMA	
	<b>Examiner</b> COLIN W. SLIFKA	<b>Art Unit</b> 4162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 14 is/are rejected.
- 7) ☒ Claim(s) 7 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/20/2007 and 6/9/2008</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7 and 14, drawn to a product.

Group II, claim(s) 8-13 and 15, drawn to a method of making.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group I does not share the special technical features of the compression molding and drying processes of Group II.

During a telephone conversation with Paul C. Lewis on 05/15/2008 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7 and 14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-13 and 15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, and 7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 10/592,124 in view of Strange (US 4,369,062) or Hattori et al (JP 2002241854). Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the instant claims fully encompasses that of applications '124, '062, and '854. Also, applicant's claim 7 completely encompasses the scope of claim 3 in '124. '124 claims a dry briquette for use as metal stock formed by solidifying metal-bearing powder dust using a solidification assistant containing at least one of sodium silicate and colloidal silica, and that solidification assistant in the amount of 0.5 to 5.0 wt%. Claim '124 does not claim shot waste being incorporated into the briquette. '062 teaches the use of steel shot in the briquettes and '854 teaches that shot beads are interchangeable with other forms of waste metals. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the shot beads as taught by '854 or the steel shot beads as taught by '062 in place of or together with the metal-bearing powder used in '124.

Claim 2 in '124 is dependant upon claim 1, and does not include the limitations of a "ferrous metal powder" of claim 3. However, claim 1 does recite "metal-bearing powder dust," which is broader and could be a ferrous metal.

This is a provisional obviousness-type double patenting rejection.

### ***Claim Objections***

Claims 7 and 14 are objected to because of the following informalities: "coloidal" is misspelled and should be "colloidal" in the claims and the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, line 3, refers to "a 'great' number of shot beads." "Great" is a relative term and there is no point of reference listed in the claim or any support found in the specification limiting the term to any specified range. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Strange (US 4,369,062). Strange teaches briquettes for use in steel making made from reclaimed mill waste (col. 1, lines 6-9) with the waste being steel shot (col. 2, lines 13-14). Regarding claim 3, Strange teaches a solidification assistant of 2 wt%, which is within applicant's range of 0.5-25 wt% (abstract).

Regarding "a great number of shot beads" in applicant's claim 1, the baghouse collection of steel shot as taught by Strange is considered to include ferrous powder and a large numbers of shot.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strange (US 4,369,062) in view of Hattori et al (JP 2002241854). Strange teaches briquettes for use in steel making made from reclaimed mill waste (col. 1, lines 6-9) with

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the waste being steel shot (col. 2, lines 13-14). Regarding claims 1 and 2, Strange teaches the addition of a clay to act as a binder and moisture absorbent (col. 2, lines 63-68). Regarding claim 3, Strange teaches a solidification assistant of 2 wt%, which is within applicant's range of 0.5-25 wt% (abstract). Strange does not teach the use of shot waste in the briquette, nor does Strange teach the briquette containing cutting residue particles and oil. Hattori teaches briquettes made from shot waste containing grinding fluid, such as oil and water, of 20% or less (abstract and par. 6, line 2). The reason for the specified amount of grinding fluid is to improve the compression process or the briquetting. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the grinding fluid and oil in the same manner as taught by Hattori in the invention as described by Strange because the grinding fluid and oil have a great impact on the briquette's manufacture.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strange (US 4,369,062) in view of Hattori et al (JP 2002241854) as applied to claim 1 above and further in view of Ishihara et al (US 2002/0152843). Strange as modified by Hattori does not teach the applicant's claimed amount of shot waste or applicant's specified solidification assistants. Ishihara teaches a briquette for use in steel making containing grinding chips from an iron-based metal and a grinding fluid containing oil and water (abstract). One of the benefits that the oil has is to suppress the oxidization of the powdery pure iron (par. 11, lines 6-8). Ishihara also teaches that the recovery dusts may be 10-55 wt% Fe (par. 60, lines 7-9). Additionally, Ishihara teaches that the

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solidification assistant may be colloidal silica (sodium silicate), aluminum phosphate, asphalt emulsion, or bentonite among others (par. 14, lines 1-5). As Ishihara teaches making a briquette with a specific amount of ferrous waste material, and specifies solidification assistants that are known to successfully form briquettes and the materials used are similar to that of Strange and Hattori, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the briquette of Strange as modified by Hattori using amounts of iron waste and known solidification assistants as disclosed by Ishihara with the expectation of successfully forming a briquette.

Claims 1-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al (US 2002/0152843) in view of Strange (US 4,369,062). Ishihara teaches a briquette for use in steel making containing grinding chips from an iron-based metal and a grinding fluid containing oil and water (abstract). One of the benefits that the oil has is to suppress the oxidization of the powdery pure iron (par. 11, lines 6-8). Ishihara does not teach the use of shot waste as the specific metal waste used in the briquette. Strange teaches briquettes for use in steel making made from reclaimed mill waste (col. 1, lines 6-9) with the waste being steel shot (col. 2, lines 13-14). Overall, these 2 inventions all teach similar methods of recycling small pieces of scrap metal. It would have been obvious to one of ordinary skill in the art at the time of the invention to use these processes to recycle steel shot, grinding chips, metal filings or shavings from machine shops, any kind of swarf, etc.... Therefore, it would also have been obvious to



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one of ordinary skill in the art at the time of the invention to use the shot waste as taught by Strange as the metal waste used in Ishihara's briquette.

Regarding claim 5, Ishihara also teaches that the recovery dusts may be 10-55 wt% Fe (par. 60, lines 7-9).

Regarding claims 2, 3, 7, and 14, Ishihara teaches that the solidification assistant may be colloidal silica (sodium silicate), aluminum phosphate, asphalt emulsion, or bentonite among others (par. 14, lines 1-5) and that the briquette contains 2-30 wt% of solidification assistant (par 17. lines 1-3), which is within applicant's claimed range of 0.5-5 wt%.

Regarding "a great number of shot beads" in applicant's claim 1, the baghouse collection of steel shot as taught by Strange is considered to include large numbers of shot.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COLIN W. SLIFKA whose telephone number is (571)270-5830. The examiner can normally be reached on Monday-Thursday, 10:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/COLIN W SLIFKA/  
Examiner, Art Unit 4162

/Jennifer McNeil/  
Supervisory Patent Examiner, Art Unit 4162